across all of the multiple cartridges. It is further possible that such an embodiment, also utilizes a single sample reader, and a single output device.

[0086] In still another configuration, a system as shown in FIG. **3** is configured to accept a single cartridge, but wherein the single cartridge is configured to process more than 1, for example, 2, 3, 4, 5, or 6, samples in parallel, and independently of one another.

[0087] It is further consistent with the present technology that a cartridge can be tagged, e.g., with a molecular bar-code indicative of one or more of the samples, to facilitate sample tracking, and to minimize risk of sample mix-up. Methods for such tagging are described elsewhere, e.g., in U.S. patent application publication Ser. No. 10/360,854, incorporated herein by reference.

[0088] In various embodiments, the apparatus can further include an analysis port. The analysis port can be configured to allow an external sample analyzer to analyze a sample in the microfluidic cartridge; for example, the analysis port can be a hole or window in the apparatus which can accept an optical detection probe that can analyze a sample in situ in the microfluidic cartridge. In some embodiments, the analysis port can be configured to direct a sample from the microfluidic cartridge to an external sample analyzer; for example, the analysis port can include a conduit in fluid communication with the microfluidic cartridge that direct a liquid sample to a chromatography apparatus, an optical spectrometer, a mass spectrometer, or the like.

[0089] Apparatus **100** may optionally comprise one or more stabilizing feet that cause the body of the device to be elevated above a surface on which system **100** is disposed, thereby permitting ventilation underneath system **100**, and also providing a user with an improved ability to lift system **100**. There may be 2, 3, 4, 5, or 6, or more feet, depending upon the size of system **100**. Such feet are preferably made of rubber, or plastic, or metal, and in some embodiments may elevate the body of system **10** by from about 2 to about 10 mm above a surface on which it is situated. The stabilizing function can also be provided by one or more runners that run along one or more edges—or are inwardly displaced from one or more edges—of the underside of the apparatus. Such runners can also be used in conjunction with one or more feet. In another embodiment, a turntable situated on the underside permits the apparatus to be rotated in a horizontal or near-horizontal plane when positioned on, e.g., a benchtop, to facilitate access from a number of angles by a user.

[0090] FIG. **4** shows a schematic cross-sectional view of a part of an apparatus as described herein, showing input of sample into a cartridge **200** via a pipette **10** (such as a disposable pipette) and an inlet **202**. Inlet **202** is preferably configured to receive a pipette or the bottom end of a PCR tube and thereby accept sample for analysis with minimum waste, and with minimum introduction of air. Cartridge **200** is disposed on top of and in contact with a heater substrate **400**. Read head **300** is positioned above cartridge **200** and a cover for optics **310** restricts the amount of ambient light that can be detected by the read head.

[0091] FIG. **5** shows an example of 4-pipette head used for attaching disposable pipette tips, prior to dispensing PCR-ready sample into a cartridge.

Exemplary Systems

[0092] FIGS. **6**A-**6**E show exterior perspective views of various configurations of an exemplary system, as further described herein. FIG. **6**A shows a perspective view of a system **2000** for receiving microfluidic cartridge (not shown), and for causing and controlling various processing operations to be performed a sample introduced into the cartridge. The elements of system **2000** are not limited to those explicitly shown. For example, although not shown, system **2000** may be connected to a hand-held bar-code reader, as further described herein.

[0093] System **2000** comprises a housing **2002**, which can be made of metal, or a hardened plastic. The form of the housing shown in FIG. **6**A embodies stylistic as well as functional features. Other embodiments of the technology may appear somewhat differently, in their arrangement of the components, as well as their overall appearance, in terms of smoothness of lines, and of exterior finish, and texture. System **2000** further comprises one or more stabilizing members **2004**. Shown in FIG. **6**A is a stabilizing foot, of which several are normally present, located at various regions of the underside of system **2000** so as to provide balance and support. For example, there may be three, four, five, six, or eight such stabilizing feet. The feet may be moulded into and made of the same material as housing **2002**, or may be made of one or more separate materials and attached to the underside of system **2000**. For example, the feet may comprise a rubber that makes it hard for system **2000** to slip on a surface on which it is situated, and also protects the surface from scratches. The stabilizing member of members may take other forms than feet, for example, rails, runners, or one or more pads.

[0094] System **2000** further comprises a display **2006**, which may be a liquid crystal display, such as active matrix, an OLED, or some other suitable form. It may present images and other information in color or in black and white. Display **2006** may also be a touch-sensitive display and therefore may be configured to accept input from a user in response to various displayed prompts. Display **2006** may have an anti-reflective coating on it to reduce glare and reflections from overhead lights in an laboratory setting. Display **2006** may also be illuminated from, e.g., a back-light, to facilitate easier viewing in a dark laboratory.

[0095] System **2000**, as shown in FIG. **6**A, also comprises a moveable lid **202**, having a handle **2008**. The lid **2010** can slide back and forward. In FIG. **6**A, the lid is in a forward position, whereby it is "closed". In FIG. **6**B, the lid is shown in a back position, wherein the lid is "open" and reveals a receiving bay **2014** that is configured to receive a microfluidic cartridge. Of course, as one of ordinary skill in the art would appreciate, the technology described herein is not limited to a lid that slides, or one that slides back and forward. Side to side movement is also possible, as is a configuration where the lid is "open" when positioned forward in the device. It is also possible that the lid is a hinged lid, or one that is totally removable.

[0096] Handle **2008** performs a role of permitting a user to move lid **2010** form one position to another, and also performs a role of causing pressure to be forced down on the lid, when in a closed position, so that pressure can be applied to a cartridge in the receiving bay **2014**. In FIG. **6**C, handle **2008** is shown in a depressed position, wherein force is thereby applied to lid **2014**, and thus pressure is applied to a cartridge received in the receiving bay beneath the lid.

[0097] In one embodiment, the handle and lid assembly are also fitted with a mechanical sensor that does not permit the handle to be depressed when there is no cartridge in the